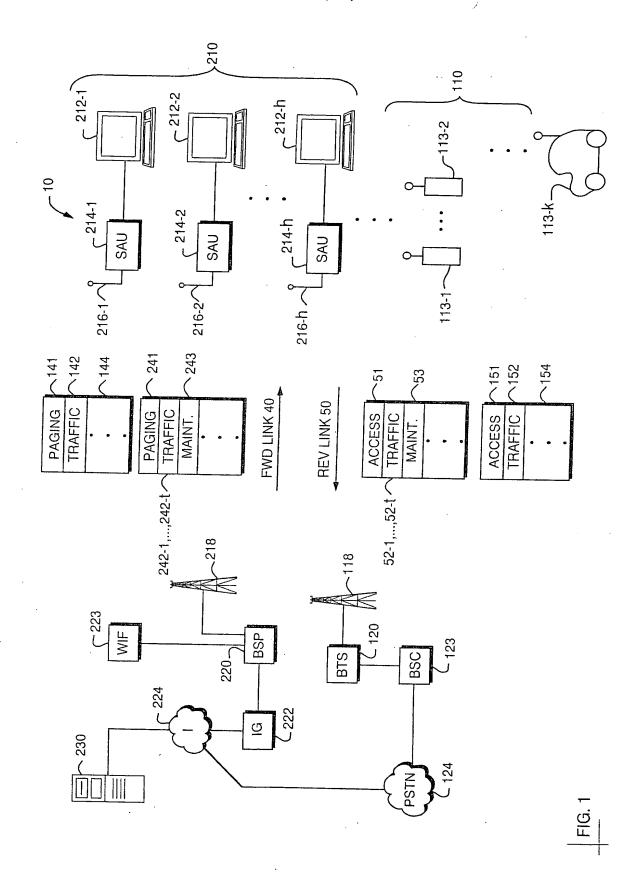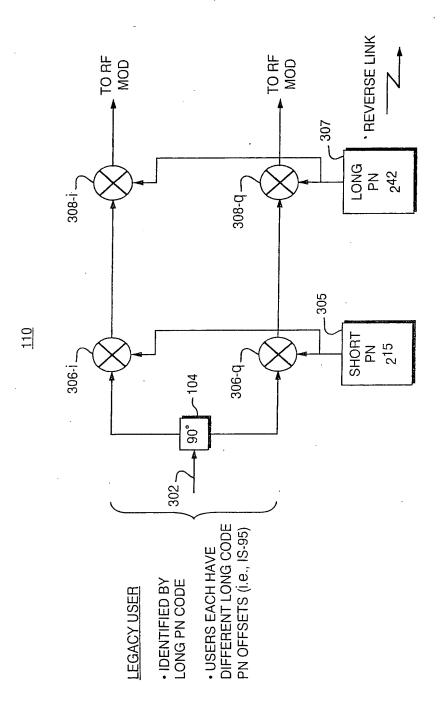Docket.: 2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

FIG. 1

Docket.: 2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

TO RF
MOD

TO RF
MOD

REVERSE LINK

307

LONG
PN
242

305

SHORT
PN
215

308-i

308-q

306-i

306-q

90°

104

302

110

LEGACY USER

• IDENTIFIED BY
  LONG PN CODE

• USERS EACH HAVE
  DIFFERENT LONG CODE
  PN OFFSETS (i.e., IS-95)

FIG. 2

Docket.: 2479.2138-001
Title: Method and Apparatus for Allowing. . .
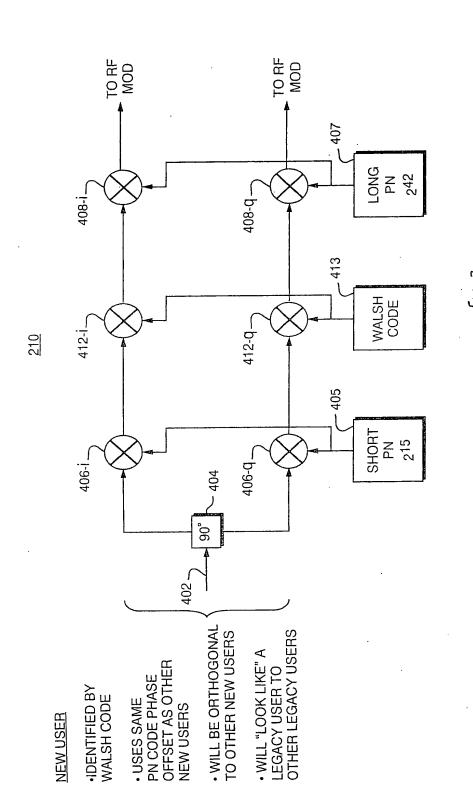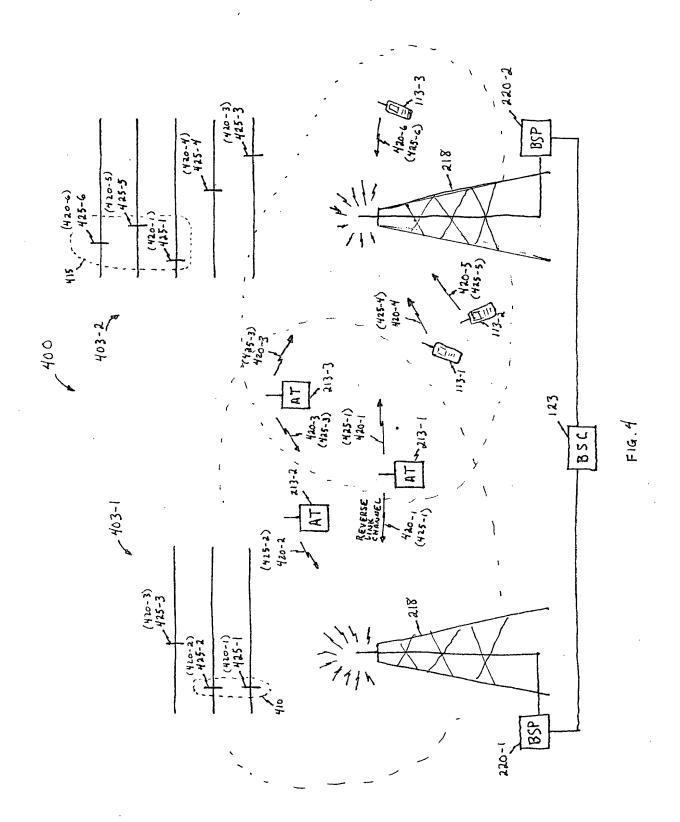Inventors: James A. Proctor, Jr., *et al.*

FIG. 3

Docket.: 2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

FIG. 4

Docket.:   2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

220-1

BSP

GROSS
TIMING
OFFSET

ORTHOGONAL
TIMING
CONTROLLER

Rx

ANTENNA
TOWER
218

513

510

505
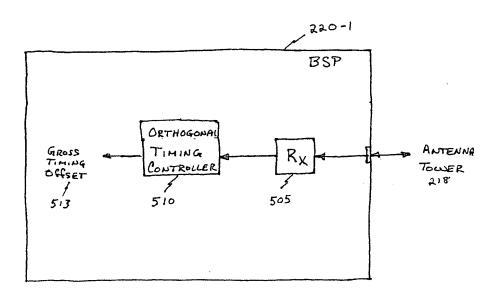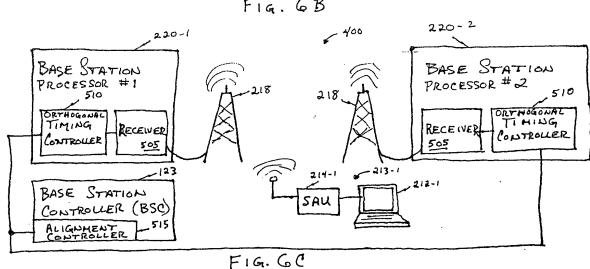
FIG. 5

Docket.:   2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

400

220-1

BASE STATION
PROCESSOR #1

ALIGNMENT
CONTROLLER   515

ORTHOGONAL
TIMING   RECEIVER
CONTROLLER   505

510

218

218

220-2

BASE STATION
PROCESSOR #2

ALIGNMENT
CONTROLLER   515

510

RECEIVER   ORTHOGONAL
505   TIMING
                  CONTROLLER

214-1   213-1

SAU   212-1

FIG. 6A

400

220-1

BASE STATION
PROCESSOR #1

ORTHOGONAL
TIMING   RECEIVER
CONTROLLER   505

510

218

218

220-2

BASE STATION
PROCESSOR #2

510

RECEIVER   ORTHOGONAL
505   TIMING
                  CONTROLLER

214-1   213-1

SAU   212-1

ALIGNMENT
CONTROLLER

515

FIG. 6B

400

220-1

BASE STATION
PROCESSOR #1
510

ORTHOGONAL
TIMING   RECEIVER
CONTROLLER   505

123

BASE STATION
CONTROLLER (BSC)

ALIGNMENT   515
CONTROLLER

218

218

220-2

BASE STATION
PROCESSOR #2
510

RECEIVER   ORTHOGONAL
505   TIMING
                  CONTROLLER

214-1   213-1

SAU   212-1

FIG. 6C

Docket.:   2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

700

BASE
STATION
PROCESSOR, 220

START — 705

710
RECEIVE
REVERSE LINK
SIGNAL

715
IS
THE REVERSE
LINK SIGNAL IN
TIME ALIGNMENT
WITH OTHER REVERSE
LINK SIGNALS
SHARING
A COMMON ORTHOGONAL
CODE

YES

NO

720
DETERMINE
GROSS TIMING
OFFSET

725
TRANSMIT
GROSS TIMING
OFFSET

END — 730

ACCESS
TERMINAL
213

735

Start — 740

745
TRANSMIT
SIGNAL w/
UNIQUE ORTHOGONAL
CODE

750
RECEIVE GROSS
TIMING OFFSET AND
MAKE COARSE TIMING
ADJUSTMENT TO REVERSE LINK SIGNAL
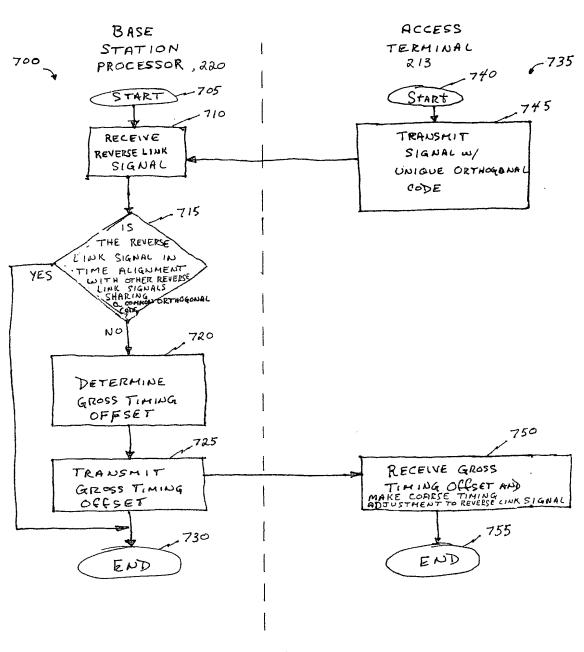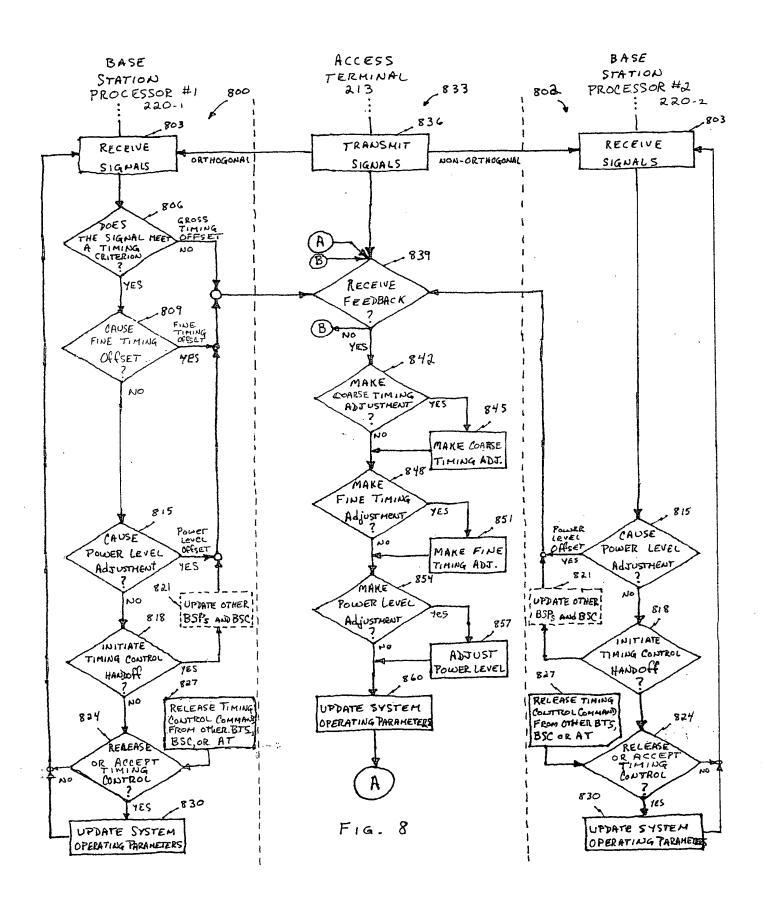
END — 755

FIG. 7

Docket.: 2479.2138-001
Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

FIG. 8

Docket.:   2479.2138-001
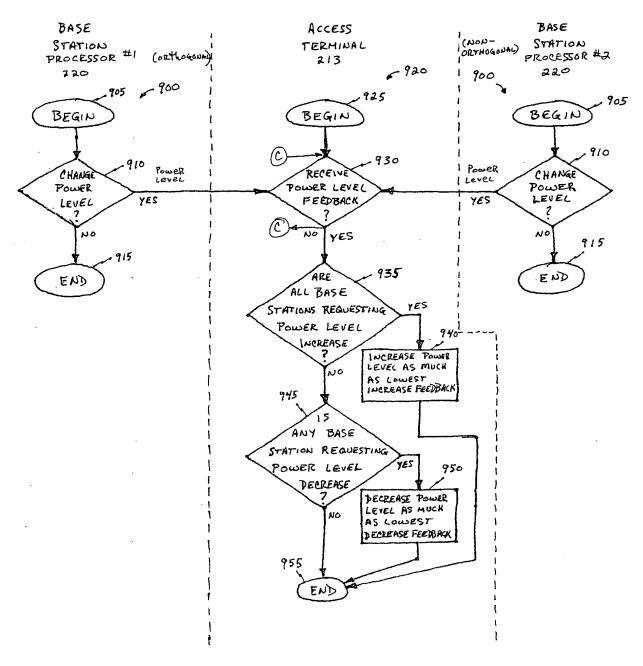Title: Method and Apparatus for Allowing. . .
Inventors: James A. Proctor, Jr., *et al.*

BASE
STATION
PROCESSOR #1 (ORTHOGONAL)
720

ACCESS
TERMINAL
213

BASE
(NON-
ORTHOGONAL)
STATION
PROCESSOR #2
220

905 900

BEGIN

920

BEGIN 925

900

BEGIN 905

910
CHANGE
POWER
LEVEL
?
YES
NO

Power
Level

C

930
RECEIVE
POWER LEVEL
FEEDBACK
?
NO   YES

Power
Level

910
CHANGE
POWER
LEVEL
?
YES
NO

915

END

C

915

END

935
ARE
ALL BASE
STATIONS REQUESTING
POWER LEVEL
INCREASE
?
YES
NO

940

INCREASE POWER
LEVEL AS MUCH
AS LOWEST
INCREASE FEEDBACK

945
IS
ANY BASE
STATION REQUESTING
POWER LEVEL
DECREASE
?
YES
NO

950

DECREASE POWER
LEVEL AS MUCH
AS LOWEST
DECREASE FEEDBACK

955

END

FIG. 9